

Documentation for shef_decoder_raw

November 2002, updated February 2003

1.0 General Information

1.1 Application Description

The primary method of getting data into the RFC Archive database, particularly unprocessed, raw data, is via SHEF messages processed by the shef_decode_raw application. The program is run continuously in the background by the user oper. This shefdecoder is fed the same SHEF products in parallel as the IHFS database's shefdecoder on the AWIPS ds system. This is accomplished with changes to the ack_patterns.txt file at each RFC. Additionally, shef messages from metar, ldad and WAN sources are fed into the archive system by placing them in the same que as the SBN shef messages.

1.2 Design Considerations

Since the archive database design was based on CBRFC's fastetc database, the starting point for the shef_decode_raw application was the shefdecoder used by CBRFC for the fastetc database. While similar to the IHFS shefdecoder, there are differences. One of the most notable is that there are 90+ error conditions being checked in the IHFS decoder while there are only 40+ being checked in the CBRFC decoder. The error conditions are listed in section 3.0. Another difference is the Archive decoder does not produce an intermediate output file. All manipulation of the message values is done in memory. Because of this, the Archive decoder should be much faster than the IHFS decoder.

1.3 Assumptions application makes

One general assumption is that properly formatted SBN shef messages, metar shef messages, ldad shef messages and WAN shef messages are being directed to the raw que. An assumption made when choosing the fastetc decoder was that the decoder was in sync with the current IHFS decoder and was compliant with the most recent shef documentation.

2.0 Configuration Information

Apps defaults tokens

Tokens used by shef_decode_raw are listed below.

adb_name	- archive database name, e.g., adb_ob1nhor
adb_shef_winpast	- the number of days in the past which a shef message cannot be older than in order to be processed, e.g., 9999.
adb_shef_winfuture	- the number of minutes into the future which a shef message must be newer than in order to be processed, e.g., 9999.

Currently the following token is not incorporated into the software but exist in the apps_defaults file for use by other programs developed by the Archive DB Implementation Team.

adb_pro_QUE	- pathname for shef messages of processed values e.g., /rfc_arc_data/q/processed.
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Also, the following two tokens are incorporated into the software but are needed only if the configuration file is not given as a parameter when the program is executed. These tokens do not exist in either the National Apps_defaults file or the Apps_defaults_site file.

local_name_cfg	- pathname for the configuration file
local_name_dir	- pathname for home directory

shef_raw.cfg file

This is the shef_raw.cfg file that was delivered with the initial version of the Archive DB. See attachment A for details.

```
/rfc_arc_data/q/raw/
/rfc_arc/logs/decoder/raw/out/
/rfc_arc/logs/decoder/raw/err/
/rfc_arc/cfg/decoders/inputparm
/rfc_arc/logs/decoder/raw/logs/
/rfc_arc/logs/decoder/raw/remote/raw/in/
-SHEFOUT
-ERRORFILE
+SHEFPASS
HG PC PP TA SW UQ
RG RF RH RS RV RM R4 RR RP R1 FA FU FZ RZ
```

inputparm file

This file is read by the shef_decoder_raw program when it is first started. This file contains all the valid SHEF pedtsep codes and information needed to decode and validate SHEF messages. The file is very similar to the shefparm file used by the IHFS db shefdecoder but is not identical. The inputparm provided is based on SHEF version 2.0. and the file also includes the SHEF type/source codes the RFC Archive DB requested and received approval

for in 2002. Attachment B contains a description and listing of this file.

command line options

The shef_decoder_raw program has a build in help option for the command line arguments. This can be generated by typing: shef_decode_raw -?

```
shef_decode_raw -t -at -d -v -s -c CCYR -e -p -b -o -fcfg filename -howold # -informix name -loop # -y -z
```

where:

-t	execute test version
-at	turn on advanced testing
-d	turn on debug information
-v	turn on verbose option
-s	create file of unknown stations/sensors (INFORMIX VER)
-e	write all INFORMIX errors to file
-c	CCYRMMDD override system date with switch for testing
-p	only write lines with errors when parsing shef
-b	turn on posting to stranger table
-o	run decoder/poster in continuous mode
-fcfg filename	input configuration path/filename from command line
-howold #	number of seconds to wait before processing file (default=1)
-informix name	input database name from command line
-loop #	where # equals the number of iterations (files processed) before stopping (default=20)
-y	copy each file to remote directory used to populate other databases
-z	turn on log to capture PE and TS used

3.0 User How-To

Start and Stop Scripts

Start and stop scripts have been provided to the user. These scripts use a similar concept as the start and stop scripts for the IHFS shefdecoder. These scripts can be found in the directory /rfc_arc/scripts/deocers and are called:

```
start_raw_decoder  
stop_raw_decoder
```

Note that the start script does not currently check the user or hostname as the IHFS shefdecoder does.

Also provided for use by the user is a script called check_raw_decoder. This script if run routinely in oper's cron, monitors to see if the shef_decode_raw is running. If it is not found, the script will attempt to restart the shefdecoder and will send an e-mail to user oper's mailbox.

Parsing Errors/Warnings

The parsing portion of the shef_decode_raw program is not identical to the IHFS db shefdecoder. While the IHFS db shefdecoder has 90 possible parsing warnings/errors, the archive db shefdecoder has only 40 parsing warnings/errors. The possible parsing warnings/errors are as follows:

Number Message

1	Error No. 1 ->This line not decoded
2	Error No. 2 ->No space in positional data
3	Error No. 3 ->Less than 3 characters in ID of message source
4	Error No. 4 ->TZ code error
5	Error No. 5 ->Date group error-not enough digits or bad value
6	Error No. 6 ->Illegal character in Id or message source
7	Error No. 7 ->Error in date code
8	Error No. 8 ->Observation time error
9	Error No. 9 ->Date relative code error
10	Error No. 10 ->Julian day error
11	Error No. 11 ->Illegal data string qualifier
12	Error No. 12 ->Units code error
13	Error No. 13 ->Not a date or data type element
14	Error No. 14 ->Not a date or data type...maybe missing slash
15	Error No. 15 ->Illegal character in parameter code
16	Error No. 16 ->File read error on shef_parm
17	Error No. 17 ->Non-existent parameter code
18	Error No. 18 ->Parameters coded with a send code
19	Error No. 19 ->Continuation of a format does not follow the correct format
20	Error No. 20 ->A format revision continuation follows an original
21	Error No. 21 ->The format that this is continuing had an error
22	Error No. 22 ->Year not in the range 1976-2020 for local time zone use Z for time zone for historical data
23	Warn No. 23 ->Forecast data without creation date
24	Error No. 24 ->Bad data somehow
25	Error No. 25 ->DV not defined for ZZV
26	Error No. 26 ->DV code error
27	Error No. 27 ->DI code error
28	Error No. 28 ->Trace specified for other than PP,PC,SF,SD or SW
29	Error No. 29 ->No time increment specified
30	Error No. 30 ->Too many items in .B body line
31	Error No. 31 ->Bad character in the line

32 Warn No. 32 ->Not enough items in .B body line
33 Error No. 33 ->No value specified
34 Error No. 34 ->No .END at end of .B ;
35 Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
36 Error No. 36 ->The explicit date referenced by DRE is not the end of the month
37 Error No. 37 ->Observation or creation time is between 020001 and 025959
on the date of change from standard to daylight time
38 Warning No.38 ->No check for daylight savings time-year out of bounds
[1976-2020]
39 Error No. 39 ->Embedded database comments with internal comments not
allowed
40 Error No. 40 ->Database comment too long

Example of an error output file is shown in Attachment C.

Posting Warnings/Errors

Posting errors are not written to the individual message error output files. Posting errors are available for viewing only when the command line argument -e is specified. When this option is specified, posting errors are written to the file sql.errors in the /rfc_arc/logs/decoder/raw/logs directory. Note that this is an ever growing file and can get quite big over time. Example of what this file contains is shown in Attachment D.

4.0 Log File

The shef_decoder_raw program generates a daily log file. The format of this log file is based on the CBRFC shefdecoder for the fastetc db. This stays static in size and reports information on how many values for various SHEF codes were processed. An example of this log file is shown in Attachment E.

5.0 Troubleshooting Information

Check the log and error files. If the log files don't indicate any problem, then consider running the shef_decode_raw with the -d option (turn on debug information) and/or the -v option (turn on verbose option).

6.0 Installation Instructions

"under construction"

7.0 Maintenance Information

Originating Programmer/Office: Toth, Monica
NWS/OHD/HL
Silver Spring, MD

Maintenance programmer/Office: NWS/OHD/HL
Silver Spring, MD

8.0 References

NWS Manual 10-942 Standard Hydrometeorological Exchange Format (SHEF) Manual

RFC Archive DB Team Request for Change to SHEF submitted February 28, 2002.

Attachment A - configuration file

THE CONFIGURATION FILES IN THE DISTRIBUTION LOAD COME AS INDICATED BELOW.

The configuration files for each decoder, 'shef_xxx.cfg' must be set up correctly for the decoder to operate. It provides a flexible way for the user to provide directory paths and some options to the decoder. DO NOT ADD EXTRA LINES to the configuration file.

A typical configuration file, along with a description, is shown below.

```
/q/calmonly/in
/q/calmonly/out
/q/calmonly/err
/lib/inputparm
  /logs/raw
  /q/remote/raw/in
-SHEFOUT
-ERRORFILE
+SHEFPASS
PPM SWI QCM
RM RG RZ 1M 2M 3M 4M 1Z 2Z 3Z 4Z 1G 2G 3G 4G
```

line 1 - > /q/calmonly/in

The path name of the directory where your data files are to be placed.

When executed, the decoder will look in this directory and attempt to decode every file, until the directory is empty. The decoder will bypass sub-directories and files that begin with a '.'. As files are decoded, they will automatically be removed from the directory.

line 2 - > /q/calmonly/out

The path name of the directory where the decoder will write the SHEF output files, if desired.

These files can be used to debug the SHEF message. They are readable files which contain the parsed off shef data. If the flag SHEFOUT is set to -SEHFOUT, no output will be written. (see line 5).

line 3 - > /q/calmonly/err

The path name of the directory where the decoder will write any error files if the '-s' and

'-e' command line options exist. Other shef decode errors are also written to this directory (See line 6 for the ERRORFILE flag).

line 4 - > /lib/inputparm

The path and file name (i.e. inputparm) of where to find the parameter file used by the decoder.

line 5 - > /q/logs

The path name of the directory where the decoder will write the stats log.

line 6 - > /q/remote/raw/in

The path name of the directory where the decoder will write a copy of all files. This option is turned on by using the 'y' command line switch. This option can be used to populate alternate queues for remote databases, etc.

line 7 - > -SHEFOUT or +SHEFOUT

FOR SWS POSTERS, LEAVE THIS OPTION SET OFF...unless you want to periodically see shefout files.)

The two options for this line are: +SHEFOUT or -SHEFOUT

+SHEFOUT

Always create a SHEF output file.

YOU WILL WANT THIS OPTION SET TO ON OR +.

-SHEFOUT

Do not create a SHEF output file.

line 8 - > +ERRORFILE or -ERRORFILE

The errorfile contains the data message, the parsed and decoded elements, and the encoded SHEF message. It also contain any parsing errors.

The two options for this line are: +ERRORFILE or -ERRORFILE

The '+' option always write an error file, even if there are no errors. Initially, you will probably want to turn this on so that you can monitor if your decoder is working. After testing, you will probably want this off, or your directory could fill up fast.

-ERRORFILE

Only write an error file if there are errors.
THIS IS NORMALLY THE OPTION TO SET after initial testing.

+ERRORFILE

Always write error messages, even if there are no errors.

NOTE: If the '-p' option is set on from the command line, only the error which have error will print out.

line 9 - > -SHEFPASS or +SHEFPASS

Leave this option set to:
+SHEFPASS

This is an internal hook that users can use to directly pass data to a DB such as INFORMIX.

line 10 - > desired SHEF PED (PE and Duration) Codes

This line allows the user to determine which SHEF values are to be passed to the database. It will also determine which codes statistics will be kept on in the stats file located in the {local_sws_post_dir}/logs directory.

line 11 - > desired TS codes

This line allows the user to determine (in conjunction with PED codes in line 7) which values are to be passed to the DB. It will also determine which codes statistics will be kept on in the stats file locate in the /logs/raw directory.

Attachment B - inputparm file

File Description

The file is a ASCII text file with the following record structure:

Columns Contents

Command card (indicates which parameters are to follow):

1-2 *n

where n is one of the following:

- 1 = Physical element codes
- 2 = Duration codes
- 3 = Type/Source codes
- 4 = Extremum codes
- 5 = Probability codes
- 6 = Send codes or duration defaults
- * = end of data
- 4 0

Physical element codes:

- 1-2 Physical element code
- 4-23 Conversion factor metric to English

Duration codes:

- 1 Duration code
- 4-8 The integer translation of the duration code

Type/Source codes:

- 1-2 Type/Source code
- 4-5 1.0 to indicate it is used

Extremum codes:

- 1 Extremum code
- 4-5 1.0 to indicate it is used

Columns Contents

Probability codes:

- 1 Probability code
- 3-22 The equivalent probability

Send codes or duration defaults:

- 1-2 Physical element or send code

4-11	The fully expanded parameter code for send codes or the three-character 'PED' combination for duration defaults
12-13	For send codes, place a '1' in this column if the observe time is the previous 7 AM otherwise place a '0' in this column
Comments	any comments included in the file must be after the ** 0 line.

File Listing

```
*1 0
AD 1.0
AF 1.0
AG 1.0
AM 1.0
AT 1.0
AU 1.0
AW 1.0
BA 0.0393701
BB 0.0393701
BC 0.0393701
BD -1.0
BE 0.0393701
BF 0.0393701
BG 1.0
BH 0.0393701
BI 0.0393701
BJ 0.0393701
BK 0.0393701
BL 0.0393701
BM 0.0393701
BN 0.0393701
BO 0.0393701
BP 0.0393701
BQ 0.0393701
CA 0.0393701
CB 0.0393701
CC 0.0393701
CD 0.0393701
CE 0.0393701
CF 0.0393701
CG 0.0393701
CH 0.0393701
CI 0.0393701
CJ 0.0393701
CK 0.0393701
CL -1.0
CM -1.0
CN 1.0
CO 1.0
CP 0.0393701
```

CQ 0.0393701
CR 0.0393701
CS 0.0393701
CT 1.0
CU -1.0
CV -1.0
CW 0.0393701
CX 0.0393701
CY 0.0393701
CZ 1.0
EA 0.0393701
ED 0.0393701
EM 0.0393701
EP 0.0393701
ER 0.0393701
ET 0.0393701
EV 0.0393701
FA 1.0
FB 1.0
FC 1.0
FE 1.0
FK 1.0
FL 1.0
FP 1.0
FS 1.0
FT 1.0
FZ 1.0
GD 0.3937008
GR 1.0
GS 1.0
GT 0.3937008
HA 3.2808399
HB 3.2808399
HC 3.2808399
HD 3.2808399
HE 3.2808399
HF 3.2808399
HG 3.2808399
HH 3.2808399
HI 1.0
HJ 3.2808399
HK 3.2808399
HL 3.2808399
HM 3.2808399
HN 3.2808399
HO 3.2808399
HP 3.2808399
HQ 1.0
HR 3.2808399
HS 3.2808399
HT 3.2808399
HU 3.2808399
HW 3.2808399
HX 3.2808399

HY 3.2808399
HZ 3.2808399
IC 1.0
IE 0.6213712
IO 3.2808399
IR 1.0
IT 0.3937008
LA 247.10541
LC 0.8107131
LS 0.8107131
MD 1.0
MI 1.0
ML 0.3937008
MM 1.0
MN 1.0
MS 1.0
MT -1.0
MU 0.3937008
MV 1.0
MW 1.0
NC 1.0
NG 3.2808399
NL 1.0
NN 1.0
NO 1.0
NS 1.0
PA 0.295297
PC 0.0393701
PD 0.295297
PE 1.0
PL 10.
PF 0.0393701
PM 1.0
PN 0.0393701
PP 0.0393701
PR 0.0393701
PT 1.0
PY 0.0393701
QA 0.0353147
QB 0.0393701
QC 0.8107131
QD 0.0353147
QE 1.0
QF 0.6213712
QG 0.0353147
QI 0.0353147
QL 0.0353147
QM 0.0353147
QN 0.0353147
QP 0.0353147
QR 0.0353147
QS 0.0353147
QT 0.0353147
QU 0.0353147

QV 0.8107131
QW 0.0353147
QX 0.0353147
QY 0.0353147
RA 1.0
RI 1.0
RN 1.0
RP 1.0
RT 1.0
RW 1.0
SA 1.0
SD 0.3937008
SF 0.3937008
SI 0.3937008
SL 0.00328084
SR 1.0
SS 1.0
ST 1.0
SW 0.0393701
TA -1.0
TB 1.0
TC -1.0
TD -1.0
TE 1.0
TF -1.0
TH -1.0
TM -1.0
TN -1.0
TP -1.0
TS -1.0
TV 1.0
TW -1.0
TX -1.0
UC 0.6213712
UD 1.0
UG 2.2369363
UL 0.6213712
UP 1.0
UQ 1.0
UR 1.0
US 2.2369363
VB 1.0
VC 1.0
VE 1.0
VG 1.0
VH 1.0
VJ 1.0
VK 1.0
VL 1.0
VM 1.0
VP 1.0
VQ 1.0
VR 1.0
VS 1.0

VT 1.0
VU 1.0
VW 1.0
WA 1.0
WC 1.0
WD 0.3937008
WG .0393701
WH 1.0
WL 1.0
WO 1.0
WP 1.0
WT 1.0
WV 3.2808399
XC 1.0
XG 1.0
XL 1.0
XP 1.0
XR 1.0
XU 2.2883564
XV 0.6213712
XW 1.0
YA 1.0
YC 1.0
YF 1.0
YR 1.0
YS 1.0
YT 1.0
*2 0
A 1008
B 1002
C 0015
D 2001
F 1004
H 1001
I 0000
J 0030
K 1012
L 1018
M 3001
N 2015
P 5004
Q 1006
R 5002
S 5001
T 1003
U 0001
V 5003
W 2007
X 5005
Y 4001
Z 5000
*3 0
1G 1
1M 1

1P	1
1R	1
1Z	1
2G	1
2M	1
2P	1
2R	1
2Z	1
3G	1
3M	1
3P	1
3R	1
3Z	1
4G	1
4M	1
4P	1
4R	1
4Z	1
5G	1
5M	1
5P	1
5R	1
5Z	1
6G	1
6M	1
6P	1
6R	1
6Z	1
7G	1
7M	1
7P	1
7R	1
7Z	1
8G	1
8M	1
8P	1
8R	1
8Z	1
9G	1
9M	1
9P	1
9R	1
9Z	1
C1	1
C2	1
C3	1
C4	1
C5	1
C6	1
C7	1
C8	1
C9	1
CA	1
CB	1

CC 1
CD 1
CE 1
CF 1
CG 1
CH 1
CI 1
CJ 1
CK 1
CL 1
CM 1
CN 1
CO 1
CP 1
CQ 1
CR 1
CS 1
CT 1
CU 1
CV 1
CW 1
CX 1
CY 1
CZ 1
FA 1
FB 1
FC 1
FD 1
FE 1
FF 1
FG 1
FM 1
FN 1
FP 1
FQ 1
FU 1
FV 1
FW 1
FX 1
FZ 1
HA 1
HB 1
HC 1
HD 1
HE 1
HF 1
HG 1
HH 1
HI 1
HJ 1
HK 1
HL 1
HM 1
HN 1

HO 1
HP 1
HQ 1
HR 1
HS 1
HT 1
HU 1
HV 1
HW 1
HX 1
HY 1
HZ 1
MA 1
MC 1
MH 1
MK 1
MS 1
MT 1
MW 1
PA 1
PB 1
PC 1
PD 1
PE 1
PF 1
PG 1
PH 1
PI 1
PJ 1
PK 1
PL 1
PM 1
PN 1
PO 1
PP 1
PQ 1
PR 1
PS 1
PT 1
PU 1
PV 1
PW 1
PX 1
PY 1
PZ 1
R2 1
R3 1
R4 1
R5 1
R6 1
R7 1
R8 1
R9 1
RA 1

RB 1
RC 1
RD 1
RF 1
RG 1
RM 1
RP 1
RR 1
RS 1
RT 1
RV 1
RW 1
RX 1
RZ 1
ZZ 1
*4 0
D 1
E 1
F 1
G 1
H 1
I 1
J 1
K 1
L 1
M 1
N 1
P 1
R 1
S 1
T 1
U 1
V 1
W 1
X 1
Y 1
Z 1
*5 0
A 0.002
B 0.004
C 0.01
D 0.02
E 0.04
F 0.05
G 0.25
H 0.75
J 0.0013
K 0.0228
L 0.1587
M -0.5
N 0.8413
P 0.9772
Q 0.9987
T 0.95

U 0.96
V 0.98
W 0.99
X 0.996
Y 0.998
Z -1.0
1 0.1
2 0.2
3 0.3
4 0.4
5 0.5
6 0.6
7 0.7
8 0.8
9 0.9
*6 0
AD ADZZZZ 0
AT ATD 0
AU AUD 0
AW AWD 0
EA EAD 0
EM EMD 0
EP EPD 0
ER ERD 0
ET ETD 0
EV EVD 0
HY HGIRZZZ 1
HN HGIRZNZ 0
HX HGIRZXZ 0
LC LCD 0
PF PPTCF 0
PP PPD 0
PR PRD 0
PY PPDRZZZ 1
QC QCD 0
QN QRIRZNZ 0
QV QVZ 0
QX QRIRZXZ 0
QY QRIRZZZ 1
RI RID 0
RP RPD 0
RT RTD 0
TC TCS 0
TF TFS 0
TH THS 0
TN TAIRZNZ 0
TX TAIRZXZ 0
SF SFD 0
UC UCD 0
UL ULD 0
XG XGJ 0
XP XPQ 0
** 0

If altering this file, be very careful!
The program looks for the key delimiters,
*1, *2, *3, *4, *5, *6, **. Values can be
added in between the delimiters. The input
file ends with **.

The program, is currently set to handle
the following number of values:

PE 250
D 35
TS 180
E 30
P 40
SEND 45

If you want more, you will need to increase
the array sizes in the program, and recompile.

When adding send codes in the section
beginning with *6, be sure to enter all
three values on each line entered. The
three values should be the 2 character
send code, the translated PEDSTEP, followed
by either a 0 or 1, depending upon if the
sendflag it off or on.

Attachment C - Parsing Error Output File Example

```
: TEST DATA FOR SHEF DECODER
: THIS INCLUDES FILES PREVIOUSLY NAMED
: DATA10, DATA11 AND DATA12
:
: MEMBER DATA10 - TEST SHEF DATA INPUT FOR VERSION 1.0 PARSING PROGRAM
MKCWRKRSC E
WOUS00 KKRF 312000
.A TTNM7 820101 Z DH12/HG 2.3: SHEF.01
.B MCI 820101 Z DH12/HG
GLLM7 1.1
.END
.E SMNM7 820101 Z DH12/HG/DIH06/2.1/2.2/2.3/2.4
.B MCI 820101 Z DH12/HG
SJSM7 1.1, KCDM7 2.2, KCKK1 5.1,
KCCM7 4.4, WVYM7 11.2, BOOM7 12.3,
.END
.C KCDM7 820102 Z DH12/HG 9.9
>
      SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
.A SJSM7 820102 Z DH12/HG 2.2
.A WVYM7 820102 Z DH12/HG 1.1
.A SJSM7 820103 Z /HK 9.9
.C KCDM7 820103 Z DH12/HG 7.7
>
      SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
.B MCI 820104 Z DH12/HG/PP/13
      >
      SHEF ERROR NUMBER 15
Error No. 15 ->Illegal character in parameter code
SMNM7 2.2/1.34/7.8
>
      SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
SMHM7 ??/1.34/7.8
>
      SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
>
      SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
GLLM7 2.2/????/7.8
>
      SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
KCDM7 2.2/1.34/7.8
KCCM7 ??/1.34/7.8
.END
```

>
SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
.A SJSM7 820105 Z DH12/HG 9.9
.B MCI 820105 Z DH12/HG
KCDM7 8.8
.END
>
SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
: TEST OF COMMENT LINE BEFORE A HEADER
.B MCI 820106 Z DH12/HG
GLLM7 3.3
TTNM7 1.1
.END
.B MCI 820107 Z DH12/EA
: TEST OF COMMENT LINE AFTER A HEADER
GLLM7 3.3
TTNM7 1.3
.END
.A SJSM7 820108 Z DH12/EM 3.3
:THESE COMMENT LINES
:SHOULD BE TOTALLY
:IGNORRED BY THE
:PARSING ROUTINE
.A KCDM7 820108 Z DH12/EP 4.4
.A SJSM7 820109 Z DH12/HG 13.5 : NOTIFY CITY OF ST JOSEPH
.B MCI 820109 Z DH12/HG: 6AM STAGES
KCDM7 21.4 :FLOOD STAGE IS 22 FT
.END
.E KCKK1 820109 Z DH12/HG/DIH06/3.3/5.4/15.5/24.4:OVERBANK FLOODING
.A SJSM7 820110 Z DH12/ET 4.4
.A KCDM7 820110 Z DH12/HC 3.3
.B MCI 820110 Z DH12/HD
GLLM7 3.3
TTNM7 1.1
BOOM7 2.2, WVYM7 3.4
.END
.E KCKK1 820110 Z DH12/HF/DIH06/2.1/4.4
.E KCKK1 820110 Z DH12/HG/DIH06/13.4/14.5
.A SJSM7 820111 Z DH12/HL 11.3/
.A1 PP 2.34/PC 5.14/QR 112.3/
.A2 US 13/UD 123/DH18/
.A3 TA 44/TD
SHEF ERROR NUMBER 33
Error No. 33 ->No value specified
.A4 88
>
SHEF ERROR NUMBER 21
Error No. 21 ->The format that this is continuing had an error
.E KCKK1 820111 Z DH12/HT/DIH06/12.2/14.3/15.1/
.E1 15.3/15.4
.B MCI 820112 Z DH12/HG

.B1 PP/TA
TTNM7 4.4/ 3.3/ 22
.END
.A KCDM7 820113 Z DH12/HR 11.1
.A1 /PP 1.23/
.A2 /PC 9.99
.A3 QR 11.2
.A GLLM7 820113 Z DH12/HS 4.4
.A SJSM7 820114 Z DH12/HW 4.4
.AR SJSM7 820114 Z DH12/HW 14.4
.B MCI 820114 Z DH12/HZ
GLLM7 1.1
.END
.BR MCI 820114 Z DH12/HZ
GLLM7 11.1
.END
.E KCKK1 820114 Z DH12/LS/DIH6/11.1/12.2/14.4
.ER KCKK1 820114 Z DH12/LS/DIH6/1.1/2.2/4.4
.A SJSM7 820115 Z DH12/HG 2.2/PP 1.25
.AR SJSM7 820115 Z DH12/HG 12.2
.A1 PP 2.25
.E KCDM7 820115 Z DH12/HG/DIH06/1.1/2.2/3.3/4.4
.ER KCDM7 0115 Z DH12/HG/DIH06/11.1/12.2/
.E1 /13.3/14.4
.E KCDM7 0115 Z DH12/HG/DIH06/6.6/7.7/8.8/9.9
.B MCI 0115 Z DH12/HG/PP
GLLM7 2.2/3.33
.END
.BR MCI 0115 Z DH12/HG
.B1 PP
GLLM7 12.2/33.3
SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
.A TTNM7 0115 Z DH12/HG 2.2/PP 1.11
.AR TTNM7 0115 Z DH12/HG 22.2
.AR1 PP 11.11
.A SMNM7 0116 Z DH12/HG 2.2
.A9 PP 1.23
.A9 PC 2.45
MKCWRKRSC EWOUS00 KKRF 312000
:SHEF.02...PARSING DATES AND TIME ZONES
.A TTNM7 0201 Z DH12/HG 2.3
.B MCI 0201 Z DH12/HG
GLLM7 1.1
.END

.A FEB28 820228 Z DH12/HG 3.4
.A MAR31 820331 Z DH12/HG 3.4
.A APR30 820430 Z DH12/HG 3.4
.A MAY31 820531 Z DH12/HG 3.4
.A JUN30 820630 Z DH12/HG 3.4
.A JUL31 820731 Z DH12/HG 3.4
.A AUG31 820831 Z DH12/HG 3.4
.A SEP30 820930 Z DH12/HG 3.4
.A OCT31 821031 Z DH12/HG 3.4
.A NOV30 821130 Z DH12/HG 3.4
.A DEC31 821231 Z DH12/HG 3.4
.A JAN32 820132 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A FEB29 820229 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A MAR32 820332 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A APR31 820431 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A MAY32 820532 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A JUN31 820631 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A JUL32 820732 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A AUG32 820832 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A SEP31 820931 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A OCT32 821032 Z DH12/HG 8.9

>
SHEF ERROR NUMBER 5
Error No. 5 ->Date group error-not enough digits or bad value
.A NOV31 821131 Z DH12/HG 8.9

SHEF ERROR NUMBER 5

Error No. 5 ->Date group error-not enough digits or bad value
.A DEC32 821232 Z DH12/HG 8.9

>

SHEF ERROR NUMBER 5

Error No. 5 ->Date group error-not enough digits or bad value
.A FEB29 800229 Z DH12/MI 3.4
.A AGYM7820206 Z DH12/HG 6.0

>

SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
.A SJSM7 820206Z DH12/HG 6.0

>

SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
.B MCI820206 Z DH12/HG

>

SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
BRLM7 8.8

.END

>

SHEF ERROR NUMBER 1

Error No. 1 ->This line not decoded
.B MCI 820206Z DH12/HG

>

SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
GLLM7 9.9

.END

>

SHEF ERROR NUMBER 1

Error No. 1 ->This line not decoded
.E SMNM7820206 Z DH12/HG/DIH6/7.7/7.7/7.7/7.7

>

SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
.E SMHM7 820206Z DH12/HG/DIH6/8.8/8.8/8.8/8.8

>

SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
.A KCCM7 820207 Z DH12/MU 4.3/DD06/MU 4.4
.A KCDM7 820207 Z DH12/MM 2.2/DJ039/MM 2.1
.A SMHM7 820207 Z DH12/MI 33/DM01/MI 45
.A SMNM7 820207 Z DH12/PA 4.4/DM0206/PA 3.3
.A FFXM7 820207 Z DH12/PC 4.1/DY81/PC 4.3
.B MCI 820207 Z DH12/HG/DD06/HG/DJ036/HG/DM01/HG/DM0204/HG/DY81/HG
BRNM7 4.5/5.4/3.3/4.2/2.3/1.4
.END
.B MCI 820207 Z DH12/HG/DD06/DH12/HG/DJ036/DH12/HG/DM01/DH12/HG
.B1 DM0204/DH12/HG/DY81/DH12/HG/DN30/HG
GLLM7 4.4/3.3/2.2/1.1/2.2/3.3/4.4
.END

.A ZULUT 820208 Z DH12/HG 1.5
.A PACST 820208 PS DH04/HG 1.5
.A MOUST 820208 MS DH05/HG 1.5
.A CENST 820208 CS DH06/HG 1.5
.A EASST 820208 ES DH07/HG 1.5
.A HAWST 820208 HS DH02/HG 1.5
.A ATLST 820208 AS DH08/HG 1.5
.A PACDA 820208 PD DH05/HG 1.5
.A MOUDA 820208 MD DH06/HG 1.5
.A CENDA 820208 CD DH07/HG 1.5
.A EASDA 820208 ED DH08/HG 1.5
.A HAWDA 820208 HD DH03/HG 1.5
.A ATLDA 820208 AD DH09/HG 1.5
.A BADTZ 820209 QS DH07/HG 1.5

>
SHEF ERROR NUMBER 33

Error No. 33 ->No value specified

.A DCTN1 820210 DH12/HG 2.3
.B OMA 820210 DH12/HG
FPKM8 2.3
.END
.E GPDS2 820209 DH18/HG/DIH6/2.3/2.3/2.3/2.3
.A PACST 820211 P DH04/PP .12
.A MOUST 820211 M DH05/PP .12
.A CENST 820211 C DH06/PP .12
.A EASST 820211 E DH07/PP .12
.A ALAST 820211 L DH02/PP .12
.A HAWST 820211 H DH02/PP .12
.A ATLST 820211 A DH08/PP .12
.A PACDA 820811 P DH05/PP .12
.A MOUDA 820811 M DH06/PP .12
.A CENDA 820811 C DH07/PP .12
.A EASDA 820811 E DH08/PP .12
.A ALADA 820811 L DH03/PP .12
.A HAWDA 820811 H DH02/PP .12
.A ATLDA 820811 A DH09/PP .12
.A NEWST 820811 N DH0930/PP .12
.A NEWST 820208 NS DH0930/HG 1.5
.A ALAST 820208 LS DH02/HG 1.5
.A YUKST 820208 YS DH03/HG 1.5
.A BERST 820208 BS DH01/HG 1.5
.A ALADA 820208 LD DH03/HG 1.5
.A YUKDA 820208 YD DH04/HG 1.5
.A BERDA 820208 BD DH02/HG 1.5
MKCWRKRSC E
WOUS00 KKRF 272100
:SHEF.03...PARSING STATION I.D.S
.A KCDM7 820301 DH12/HG 4.4
.A SJSM7TTNM 820301 DH12/HG 9.9

>
SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data

.A GLLM7 820301 DH12/HG 3.2

.B MCI 820301 DH12/HG
TTNM7 2.4
SMNM7SMHM 99.9
>
 SHEF ERROR NUMBER 2
Error No. 2 ->No space in positional data
>
 SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
KCCM7 4.4
WVYM7 12.3
.END
.A GLLM7 820302 DH12/HG 3.2
.A M7 820302 DH12/HG 9.9
>
 SHEF ERROR NUMBER 3
Error No. 3 ->Less than 3 characters in ID of message source
.A KCKK1 820302 DH12/HG 4.3
.B MCI 820302 DH12/HG
TTNM7 2.1
AB 9.9
>
 SHEF ERROR NUMBER 3
Error No. 3 ->Less than 3 characters in ID of message source
>
 SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
WVYM7 4.4
.END
.AKCDM7 820303 DH12/HG 9.7
>
 SHEF ERROR NUMBER 2
Error No. 2 ->No space in positional data
.A SJSM7820303 DH12/HG 8.9
>
 SHEF ERROR NUMBER 2
Error No. 2 ->No space in positional data
.B MCI 820303 DH12/HG
GLLM76.8
>
 SHEF ERROR NUMBER 6
Error No. 6 ->Illegal character in Id or message source
>
 SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
.E KCCM7820303 DH12/HG/DIH6/6.6/7.7/8.8
>
 SHEF ERROR NUMBER 2
Error No. 2 ->No space in positional data
.EKCKK1 820303 DH12/HG/DIH6/9.9/8.8/7.7
>
 SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data
.B MCI 820303 DH12/HG
TTNM7 4.2,SMHM7 3.1,SMNM79.9,
>
SHEF ERROR NUMBER 6

Error No. 6 ->Illegal character in Id or message source
>
SHEF WARNING NUMBER 32

Warng No. 32 ->Not enough items in .B body line
WVYM7 9.9BOOM7 8.8,LKCM7 4.4,
>
SHEF ERROR NUMBER 31

Error No. 31 ->Bad character in the line
.END
.A SJSM7 820304 DH12/PP 2.43
.A X1234567 820304 DH12/PP 12.54 :GULLYWASHER,KANSAS
.A KCDM7 820304 DH12/PP 2.35
.B MCI 820305 DH12/PP
GLLM7 3.24
X0000000 14.32 : CATSNDogs,MISSOURI
TTNM7 4.12
X123456 9.87 :TORRENTS,MISSOURI...HAS TOO FEW CHARACTERS
LKCM7 3.55
.END
.A AB\$I2 820307 DH12/PP 9.96 :THUNDERSTORM,IAWA...HAS ILLEGAL CHARACTER
>
SHEF ERROR NUMBER 6

Error No. 6 ->Illegal character in Id or message source
MKCWRKRSC EWOUS00 KKRF 312000
:SHEF.04...PARSING OBSERVATION TIMES
.B MCI 820401 /PT
KCDM7 4.2
.END
.B MCI 820402 DH12/PC

Error No. 8 ->Observation time error
SJSM7 9.9
>
SHEF ERROR NUMBER 30

Error No. 30 ->Too many items in .B body line
.END
.A KCDM7 820406 DH12/QD 4.2/DH18/QD 3.2
.B MCI 820406 DH12/QG/DH18/QG

SJSM7 3.1/2.1
.END
.B MCI 820407 DH12 /QI
KCDM7 3.1
.END
.B MCI 820408 DH12/QN/DD01/DH12/QN/ DD02 /QN
SJSM7 1.4/1.5/1.3
.END
.B MCI 820409 DH12/QL/DD1/DH12/QL/ DD2 /QL
>
SHEF ERROR NUMBER 8
Error No. 8 ->Observation time error
KCDM7 2.3/9.8/6.7
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 820410 DH12/QP/DJ099/QP
KCDM7 4.5/3.2
.END
.B MCI 820411 DH12/QS/DJ20/QS
SJSM7 3.3/9.9
.END
.B MCI 821201 DC120113/DH12/QVMF/DM01/QVMF
SJSM7 3.41/2.52
.END
.B MCI 820413 DH12/QUM/DM3/QUM
>
SHEF ERROR NUMBER 8
Error No. 8 ->Observation time error
KCDM7 4.51/9.99
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 821231 DC123113/DH12/RADF/DM0101/RADF
KCDM7 4.4/4.3
.END
.B MCI 820101 DH12/RCY/DY81/RCY
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 34.3/32.1
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 990101 DC010113/DH12/RIYF/DY00/RIYF
SJSM7 34.1/42.3
.END
.B MCI 841230 DC123013/DH12/RIDF/DJ366/RIDF
KCDM7 4.1/4.2
.END

.B MCI 831230 DH12/DC123013/RPDF/DJ366/RPDF
 >
 SHEF ERROR NUMBER 10
 Error No. 10 ->Julian day error
 SJSM7 4.1/9.9
 >
 SHEF ERROR NUMBER 30
 Error No. 30 ->Too many items in .B body line
.END
.B MCI 821201 DH12/DC120113/RPMF/DM13/RPMF
 >
 SHEF ERROR NUMBER 8
 Error No. 8 ->Observation time error
 GLLM7 3.32/9.99
 >
 SHEF ERROR NUMBER 30
 Error No. 30 ->Too many items in .B body line
.END
.B MCI 820420 DH12/HG/DRD+1/HG/DRD+2/HG/DRJ+3/HG/DRD-1/HG/DRD-2/HG
 >
 SHEF ERROR NUMBER 9
 Error No. 9 ->Date relative code error
 TTNM7 3.4/3.1/2.2/4.1/3.5/5.5
 >
 SHEF ERROR NUMBER 30
 Error No. 30 ->Too many items in .B body line
.END
.B MCI 820420 DH12/RP/DRH+6/RP/DRH+12/RP/DRH+18/RP/DRH+24/RP
 KCKK1 4.1/4.2/4.3/4.4/4.5
.END
.B MCI 820420 DH12/RP/DRH-6/RP/DRH-12/RP/DRH-18/RP/DRH-24/RP
 KCCM7 4.1/4.2/4.3/4.4/4.5
.END
.B MCI 820101 DH12/RTM/DRM+1/RTM/DRM-1/RTM
 BRNM7 2.41/3.52/4.25
.END
.B MCI 820101 DH12/DC010113/RTY/DRY+1/RTYF/DRY-1/RTY
 LKCM7 32.1/23.4/41.5
.END
.B MCI 820421 DH12/SA/DRD+1/SD/DRH+24/SF/DRN+1440/SL
 >
 SHEF ERROR NUMBER 14
 Error No. 14 ->Not a date or data type...maybe missing slash
 KCDM7 /2.4/1.43/42.1
 >
 SHEF ERROR NUMBER 30
 Error No. 30 ->Too many items in .B body line
.END
.A KCDM7 820423 DN30/HG 4.2
.A SJSM7 820423 DH1230/HG 4.2
.A GLLM7 820423 DD231230/HG 4.2
.A SMNM7 820423 DM04231230/HG 4.2
.A SMHM7 820423 DY8204231230/HG 4.2

.A LKCM7 820423 DH1230/HG 4.2/DJ82093/HG 4.2
.A KCCM7 820423 DH1230/HG 4.2/DJ82093/HG 4.2
MKCWRKRSC E
WOUS00 KKRF 121800
:SHEF.05...PARSING CREATION TIMES
.B MCI 820501 CS DH0600/DC0501/SR
KCDM7 9.9
.END
.B MCI 820502 DH06/DC050207/SW
SJSM7 3.2
.END
.B MCI 820503 DH06/DC05030730/SS
GLLM7 3.1
.END
.B MCI 820504 DH12/DC8205031330/TA
LKCM7 2.4
.END
.B MCI 820505 DH12/DC053213/HG
 >
 SHEF ERROR NUMBER 7
Error No. 7 ->Error in date code
KCDM7 9.9
 >
 SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 820506 DH12/DC05302445/HG
 >
 SHEF ERROR NUMBER 7
Error No. 7 ->Error in date code
SJSM7 9.9
 >
 SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 820507 DH12/DC8I05301330/HG
 >
 SHEF ERROR NUMBER 7
Error No. 7 ->Error in date code
KCDM7 9.9
 >
 SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
MKCWRKRSC EWOUS00 KKRF 242100
:SHEF.06...PARSING UNITS CODE
: TEST 1...METRIC...M,CMS,MM,MCM,CM,M,DC,KM
.B MCI 820601 DH12/DUS/HG/QR/PP/LS/SD/SL/TA/HZ
SJSM7 2.3/1.1/1.1/3.4/2.1/2.5/13/5.3
.END
: TEST 2...ENGLISH...FT,KCFS,IN,KAF,IN,KFT,DF,KFT
.B MCI 820602 DH12/DC070212/DUE/HG/QR/PP/LS/SD/SL/TA/HZ
SJSM7 2.3/1.1/1.1/3.4/2.1/2.5/13/5.3

```
.END
: TEST 3...UNITS ASSUMED ENGLISH
.B MCI 820603 DH12/TA/HG
SJSM7 3.4/1.21
.END
: TEST 4...ILLEGAL UNITS CODE
.B MCI 820604 DH12/DUM/HG
>
    SHEF ERROR NUMBER 12
Error No. 12 ->Units code error
SJSM7 9.9
>
    SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
: TEST 5...UNITS SHOULD REMAIN UNTIL RESPECIFIED
.A SJSM7 820605 DH12/DUE/HG 2.3
.A KCDM7 820605 DH12/HG 2.3
.A SMHM7 820605 DH12/DUS/HG 4.5
.A SMNM7 820605 DH12/HG 4.5
.A LKCM7 820605 DH12/DUE/HG 2.3
MKCWRKRSC      E
WOUS00 KKRF 312000
:SHEF.07...ALL POSSIBLE PARAMETER CODES
.B MCI 0701 DH12/EA/EM/EN/EP/ET/EV/FA/FB/FC/FE
>
    SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7/8/9/10
>
    SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0701 DH12/FK/FL/FP/FS/FT/FZ/GD/GR/GT/HA
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 DH12/HB/HC/HD/HE/HF/HG/HH/HL/HM/HN
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 DH12/HP/HR/HS/HT/HW/HX/HY/HZ/IC/IE
KCDM7 1/2/3/4/5/6/7/8/9/10
>
    SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
>
    SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
.B MCI 0701 DH12/IO/IR/IT/LA/LC/LS/MM/MI/ML/MS
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 CD DH07/MU/NG/NP/PA/PC/PP/PT/PY/QA/QC
>
```

SHEF ERROR NUMBER 17

Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7/8/9/10

>

SHEF ERROR NUMBER 30

Error No. 30 ->Too many items in .B body line
.END
.B MCI 0701 DH12/QD/QG/QI/QL/QM/QN/QP/QR/QS/QT
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 CD DH07/QU/QV/QX/QY/RA/RC/RI/RP/RT/SA

>

SHEF ERROR NUMBER 17

Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7/8/9/10

>

SHEF ERROR NUMBER 30

Error No. 30 ->Too many items in .B body line
.END
.B MCI 0701 DH12/SD/SF/SL/SR/SS/SW/TA/TD/TF/TH
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 DH12/TM/TN/TP/TS/TW/TX/UC/UD/UL/US
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 DH12/VB/VC/VE/VG/VH/VJ/VK/VL/VM/VP
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 DH12/VQ/VR/VS/VT/VU/WA/WC/WG/WH/WL
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0701 DH12/WO/WP/WT/WV/XW/XV/AT/AU/YA/YZ

>

SHEF ERROR NUMBER 17

Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7/8/9/10

>

SHEF ERROR NUMBER 30

Error No. 30 ->Too many items in .B body line
.END
.B MCI 0701 DH12/AF/GS/XP/AW/AD/AM
KCDM7 1/2/3/4/5/6
.END
.B MCI 0702 DH12/HGI/PPU/PAC/PPJ/HGH/PTT/PPQ/QAA/QCK/QDL
KCDM7 1/2/3/4/5/6/7/8/9/10
.END
.B MCI 0702 DH12/HGD/QGW/QIM/QLY/PPP/QMV/QMS/QPR/QRZ
KCDM7 1/2/3/4/5/6/7/8/9

>

SHEF ERROR NUMBER 25

Error No. 25 ->DV not defined for ZZV

>

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line
.END
.B MCI 0703 DH12/HGIC/PPUF/PACP/PPJR
KCDM7 1/2/3/4
>
SHEF WARNING NUMBER 23
Warn No. 23 ->Forecast data without creation date
.END
.B MCI 0704 DH12/HGIC1/PPUC2/PACC3/PPJC9/HGHCA/PTTCZ/HGIRA/PPURB/PACRC
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7/8/9
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0704 DH12/PPJRD/HGHRK/PTTRM/HGIRN/PPUCP/PACCQ/PPJRU/HGHCV/PTTRW
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7/8/9
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0704 DH12/HGICX/PPURZ/PACPA/PPJPB/HGHPC/PTTPD/HGIPE/PPUPY/PACPZ
KCDM7 1/2/3/4/5/6/7/8/9
.END
.B MCI 0704 DH12/PPJRA/HGHRB/PTTRC/HGIRD/PPURG/PACRM/PPJRP/HGHRR/PTTRT
KCDM7 1/2/3/4/5/6/7/8/9
.END
.B MCI 0704 DH12/HGIRV/PPURZ
KCDM7 1/2
.END
.B MCI 0705 DH12/HGIC1K/PPUC2L/PACC3M/PPJC9N/HGHCAP/PTTCZU/HGICAV
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6/7
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0705 DH12/PPUC2W/PACC3X/PPJCAY/HGHC9Z
KCDM7 1/2/3/4
.END
.B MCI 0706 DH12/HGIC1KA/PPUC2LB/PACC3MC/PPJC9ND/HGHCAPE/PTTCZUF
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6
>

SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0706 DH12/HGIC1V1/PPUC2W2/PACC3X3/PPJC9Y4/HGHCAZ5/HGIC1K6
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0706 DH12/PPUC2L7/PACC3M8/PPJC9N9/HGHCAPT/PTTCZUU/HGIRAVV
KCDM7 1/2/3/4/5/6
.END
.B MCI 0706 DH12/PPUCAWW/PACCAXX/PPJC1YY/HGHC3ZJ/HGIC1KK/PPUC2LL
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5/6
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
.B MCI 0706 DH12/PACC3MM/PTTCZUN/HGIRAVP/PPURAWQ/HGIC1KZ
>
SHEF ERROR NUMBER 17
Error No. 17 ->Non-existent parameter code
KCDM7 1/2/3/4/5
>
SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
MKCWRKRSC EWOUS00 KKRF 312000
:SHEF.08...INVALID PARAMETER CODES & STD DEFAULTS
: TEST #1...INVALID CODES
.A KCDM7 820801 DH12/HK 9.9
.A SJSM7 820801 DH12/HG? 9.9
>
SHEF ERROR NUMBER 15
Error No. 15 ->Illegal character in parameter code
.A GLLM7 820801 DH12/HGD0 9.9
>
SHEF ERROR NUMBER 15

.A LKCM7 820801 DH12/HGDRVPR 9.9
 >
 SHEF ERROR NUMBER 17
 Error No. 17 ->Non-existent parameter code
.A SMHM7 820801 DH12/HGDRVPR 34.4
: TEST #2...ONLY ONE CHARACTER TO DESCRIBE PC
.B MCI 820802 DH12/HG/H/PP
 >
 SHEF ERROR NUMBER 15
 Error No. 15 ->Illegal character in parameter code
SJSM7 11.2/9.9/1.43
 >
 SHEF ERROR NUMBER 30
 Error No. 30 ->Too many items in .B body line
.END
: TEST #3...EIGHT CHARACTERS TO DESCRIBE PC
.B MCI 820803 DH12/HGDRVPR 5A
 >
 SHEF ERROR NUMBER 31
 Error No. 31 ->Bad character in the line
SJSM7 9.9
 >
 SHEF ERROR NUMBER 30
 Error No. 30 ->Too many items in .B body line
.END
: TEST #4...USING "Z" AS NULL FIELD DESIGNATOR
 >
 SHEF ERROR NUMBER 39
 Error No. 39 ->Embedded database comments with internal comments not allowed
.A KCDM7 820804 DH12/HGIRZP 3.4
.A SJSM7 820804 DH12/HGIRVZ5 3.4
.A GLLM7 820804 DH12/HGIRVPZ 3.4
.A SMNM7 820804 DH12/HGIRVP5 3.4
.A SMHM7 820804 DH12/HGIRZZZ 3.4
: TEST #5...DEFAULT DURATION FOR DURATION CODE "P"
 >
 SHEF ERROR NUMBER 39
 Error No. 39 ->Embedded database comments with internal comments not allowed
.A SJSM7 820807 DH18/PPP 1.21
.A SJSM7 820807 DH00/PPP 2.42
.A SJSM7 820807 DH06/PPP 3.31
.A SJSM7 820807 DH12/PPP 4.24
: TEST #6...DEFAULT DURATIONS FOR ALL PHYSICAL ELEMENTS
.B MCI 820808 DH12/GD/HF/HG/HL/HW/HZ/IC/LS/MI/PC/QD
SJSM7 1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1
.END
.B MCI 820808 DH12/QI/QP/QR/QS/SD/SL/SF/SW/TA/TD/TW
SJSM7 1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1/1.1
.END
.B MCI 820808 DH18/GDI/HFI/HGI/HLI/HWI/HZI/ICI/LSI
SJSM7 2.2/2.2/2.2/2.2/2.2/2.2/2.2/2.2
.END
.B MCI 820808 DH18/MHI/PCI/QDI/QII/QPI/QRI/QSI/SDI/SLI


```
: TEST #7...USING VALID DATA QUALIFIERS
.B MCI 820907 DH12/TP
SJSM7 1.1E
SMHM7 2.2S
KCDM7 3.3V
KCCM7 4.4R
GLLM7 5.5Q
SMNM7 11.1T
KCKK1 22.2F
.END
: TEST #8...USING INVALID DATA QUALIFIERS
.B MCI 820908 DH12/HG
KCDM7 9.9A
SJSM7 9.9 E
>
      SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
.END
.B MCI 820909 DH12/DQE/HG/PP/DQZ/QR/DQA/PC
KCDM7 14.4/1.21/111/99.9
SJSM7 12.3/1.34/144/9.99
.END
MKCWRKRSC    EWOUS00 KKRF 311400
:SHEF.10...MISCELLANEOUS...ORDER OF D ELEMENTS,VARIABLE DURATION,DATE OV
.
>
      SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
:TEST#1...15 SPACES TO END LINE
:COMMENT LINE      IGNORRED
.A KCDM7 821001 DH12/HG 2.43/PP      IGNORRED
>
      SHEF ERROR NUMBER 33
Error No. 33 ->No value specified
.B MCI 821001 DH12/HG/PP      IGNORRED
>
      SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
KCDM7 12.3/1.11/9.99
      SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
.B MCI 821001 DH12/HG/PP
SMNM7 12.3/      IGNORRED
>
      SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
.END
.E SJSM7 821001 DH12/DIH6/HG/3.3/4.4/      IGNORRED
>
      SHEF ERROR NUMBER 33
Error No. 33 ->No value specified
:TEST#2...VARIED ORDER OF DATE AND DATA ELEMENTS.
```

.A KCDM7 821002 DC100213/DH12/DUE/DQF/DVN30/PP 1.23
.A SJSM7 821002 DUE/DC100213/DH12/DQS/DVN30/PP 1.23
.A KCKK1 821002 DQV/DUE/DC100213/DH12/DVN30/PP 1.23
.A LKCM7 821002 DVN30/DQR/DUE/DC100213/DH12/PP 1.23
.B MCI 821002 DUE/DQQ/DC100213/DVN30/DH12/PP
SMNM7 1.23
.END
.E SMHM7 821002 DQT/DC100213/DIN30/DVN30/DUE/DH12/PP/1.23
:TEST#3...VARIABLE DURATION CODE
.A KCDM7 821003 DH12/DVN99/PPV 1.23
.A SJSM7 821003 DH12/DVH99/PPV 12.34
.A SMNM7 821003 DH12/DVD99/PPV 22.22
.B MCI 821003 DH12/DVM99/PPV
SMHM7 222.22
.END
.E LKCM7 821003 DH12/DVY99/PC/DIY99/2222.22
:TEST#4....B FORMAT "D ELEMENTS" OVERRIDE
>
SHEF ERROR NUMBER 39
Error No. 39 ->Embedded database comments with internal comments not allowed
.B MCI 821004 DH12/DC100413/DUE/DQE/DVN30/HG/PP/QR
KCDM7 12.2/1.23/DH13/222.2
SJSM7 13.3/DC100414/1.23/234.5
SMNM7 DUS/2.3/45.4/14.3
SMHM7 DQR/2.3/1.23/23.1
LKCM7 DVH02/2.4/1.23/24.1
KCKK1 DH13/4.5/DUS/55.5/DVH12/44.4
KCCM7 DH13/DC100414/DUS/DQR/DVH06/4.5/1.23/55.1
.END
:TEST#5...TESTING COMPLEX DATE RELATIVE CODE
.B MCI 821005 DH12/HG/DRN-30/HG/DRN-60/HG/DRH-6/HG/DRH-12/HG/DRH-18/HG/
.B1 DRD-1/HG/DRD-30/HG/DRM-1/HG/DRM-12/HG
SJSM7 1/2/3/4/5/6/7/8/9/10
SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
.B MCI 821005 DH12/HG/DRM-12/HG/DRM-1/HG/DRD-30/HG/DRD-1/HG/DRH-18/HG
.B1 DRH-12/HG/DRH-6/HG/DRN-60/HG/DRN-30/HG
KCDM7 10/9/8/7/6/5/4/3/2/1
SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
:TEST#6...TZ CODE ERROR
.A KCDM7 821006 CQ DH06/HG 9.99
>
SHEF ERROR NUMBER 4
Error No. 4 ->TZ code error
:TEST#7...ERRONEOUS CONTINUATION LINES
.A KCDM7 821007 DH12/HG 4.3/
.B1 PP 9.99
>
SHEF ERROR NUMBER 19
Error No. 19 ->Continuation of a format does not follow the correct format

.A SJSM7 821007 DH12/HG 5.5/
.AR1 PP 9.99
>
SHEF ERROR NUMBER 20
Error No. 20 ->A format revision continuation follows an original
.A SMNM7 821007 DH12/H 9.99/
>
SHEF ERROR NUMBER 15
Error No. 15 ->Illegal character in parameter code
.A1 PP 8.88
>
SHEF ERROR NUMBER 21
Error No. 21 ->The format that this is continuing had an error
:TEST#8...YEAR OUTSIDE DEFAULT TIME ZONE RANGE
.A KCDM7 751008 C DH07/HG 9.99
>
SHEF ERROR NUMBER 22
Error No. 22 ->Year not in the range 1976-2020 for local time zone
...use Z for time zone for historical data
.A SJSM7 751008 CD DH07/HG 4.44
:TEST#9...DV CODE ERROR
.A SJSM7 821009 DH12/DVW02/HG 9.9
>
SHEF ERROR NUMBER 26
Error No. 26 ->DV code error
.A SMNM7 821009 DH12/DVN100/HG 9.9
>
SHEF ERROR NUMBER 14
Error No. 14 ->Not a date or data type...maybe missing slash
:TEST#10...DI CODE ERROR
.E KCKK1 821010 DH12/HG/DIW01/9.9/8.8/7.7
>
SHEF ERROR NUMBER 27
Error No. 27 ->DI code error
.E KCKK1 821010 DH12/HG/DIN100/7.7/8.8/9.9
>
SHEF ERROR NUMBER 14
Error No. 14 ->Not a date or data type...maybe missing slash
:TEST#11...TRACE REPORTED FOR NON PRECIP CODE
.A KCDM7 821011 DH12/HG T
>
SHEF ERROR NUMBER 28
Error No. 28 ->Trace specified for other than PP,PC,SF,SD or SW
:TEST#12....E WITHOUT TIME INCREMENT
.E SMHM7 821012 DH12/HG/6.6/7.7/8.8/9.9
>
SHEF ERROR NUMBER 29
Error No. 29 ->No time increment specified
:TEST#13...BAD DATE SOMEHOW
.A KCDM7 840229 DH12/HG 4.4/DRY+1/HG 9.9
>
SHEF ERROR NUMBER 24
Error No. 24 ->Bad data somehow

MKCWRKRSC EWOUS00 KKRF 271400
:SHEF.11...DEFAULT OF YEAR
:TODAY IS JANUARY 10,1982
.B MCI 0709 DH12/HG
KCDM7 11.1
.END
.B MCI 0710 DH12/HG
KCDM7 22.2
.END
.B MCI 0711 DH12/HG
KCDM7 33.3
.END
:TODAY IS JULY 10,1982
.B MCI 0109 DH12/HG
KCDM7 11.1
.END
.B MCI 0110 DH12/HG
KCDM7 22.2
.END
.B MCI 0111 DH12/HG
KCDM7 33.3
.END
.B MCI 0109 DH12/HG/DRH+24/HG/DRD+2/HG/DRM+1/HG
SMNM7 1.1/2.2/3.3/4.4
.END
MKCWRKRSC EWOUS00 KKRF 221500
:SHEF.12...END-OF-MONTH CODES
.A KCDM7 830228 DH12/HG 2.2/DRE+1/HG 3.3/DRE+2/HG 4.4/DRE+3/HG 5.5/
.A1 DRE+4/HG 6.6/DRE+5/HG 7.7/DRE+6/HG 8.8/DRE+7/HG 9.9/DRE+8/HG 1.1
.A2 DRE+9/HG 2.2/DRE+10/HG 3.3/DRE+11/HG 4.4/DRE+12/HG 5.5
.A SJSM7 840229 DH12/HG 2.2/DRE+1/HG 3.3/DRE+2/HG 4.4/DRE+3/HG 5.5/
.A1 DRE+4/HG 6.6/DRE+5/HG 7.7/DRE+6/HG 8.8/DRE+7/HG 9.9/DRE+8/HG 1.1/
.A2 DRE+9/HG 2.2/DRE+10/HG 3.3/DRE+11/HG 4.4/DRE+12/HG 5.5
.A SMNM7 831031 DH12/HG 2.2/DRE-1/HG 3.3/DRE-8/HG 4.4/DRE-12/HG 5.5/
.A1 DRE-30/HG 6.6/DRE+4/HG 7.7
.E KCCM7 830228 DH12/HG/DIE1/1/2/3/4/5/6/7/8/9/10/11/12/13
.E LKCM7 840229 DH12/HG/DIE1/1/2/3/4/5/6/7/8/9/10/11/12/13
.E GLLM7 1031 DH12/HG/DIE14/1/2/3/4/5
.A CHLM7 0930 DH12/HG 1.1/DRE+2/HG 2.2/DM1001/HG 3.3/DRE+1/HG 9.9

>

SHEF ERROR NUMBER 36

Error No. 36 ->The explicit date referenced by DRE is not the end of the month
.E TTNM7 0731 DH12/HG/DIE2/1.1/2.2/DM0801/9.9/9.9

>

SHEF ERROR NUMBER 36

Error No. 36 ->The explicit date referenced by DRE is not the end of the month

.A KCKK1 0531 DH02/HG 1.1/DRE+1/HG 2.2
MKCWRKRSC EWOUS00 KKRF 172200
:SHEF.13...17NOV1982
:TEST #1...GLOBAL STRANGER STATIONS
.B MCI 1117 DH12/PP
W8991799 2.52 : SOUTHWEST
X8991799 2.52 : NORTHWEST

```

Y0010001 2.52 : NORTHEAST
Z0010001 2.52 : SOUTHEAST
.END
.B MCI 1118 Z DH12/PP
W8991850 3.33 : SOUTHEAST
X8991900 4.44 : NORTHEAST
Y8991950 5.55 : NORTHWEST
Z8999999 2.22 : SOUTHWEST
.END
.B MCI 1119 CS DH07/PP
W9101500 3.11 : SOUTHEAST
X9999999 4.44 : NORTHWEST
.END
.B MCI 1120 C DH07/PP
W5001300 5.55 : SOUTHWEST
.END
:TEST #2...CHANGING TIME STANDARD DURING A TIME SERIES
.A KCDM7 820425 DH07/HG 2.2/DH08/HG 3.3/DH0801/HG 4.4
.A KCDM7 821031 DH06/HG 2.2/DH07/HG 3.3/DH0701/HG 4.4
.A KCDM7 830424 DH07/HG 2.2/DH08/HG 3.3/DRN+1/HG 4.4
.E KCDM7 841028 DH06/HG/DIH1/2.2/3.3/4.4/5.5
.A KCDM7 850428 CS DH01/HG 2.2/DH02/HG 3.3/DH03/HG 4.4/DH0301/HG 5.5
.A KCDM7 861026 CD DH01/HG 2.2/DH02/HG 3.3/DH0201/HG 4.4
.A KCDM7 870426 CS DH01/HG 2.2/DRH+1/HG 3.3/DRH+3/HG 4.4
.E KCDM7 881030 CD DH01/HG/DIH1/2.2/3.3/4.4/5.5
.A KCDM7 891029 C DH01/HG 2.2/DH02/HG 3.3/DH0201/HG 4.4
.A KCDM7 900429 C DH02/HG 2.2/DH0230/HG 3.3/DH0301/HG 4.4
.A KCDM7 910428 C DH01/HG 2.2/DRH+2/HG 3.3/DRN+90/HG 4.4
.E KCDM7 920426 C DH01/HG/DIH1/2.2/3.3/4.4/5.5
.A KCDM7 930425 C DH01/HG 2.2/DRD+1/HG 3.3/DRM+1/HG 4.4/DRY+1/HG 5.5
.E KCDM7 940424 C DH01/HG/DID1/2.2/3.3
.E SJSM7 940424 C DH01/HG/DIM1/2.2/3.3
.E SMNM7 940424 C DH01/HG/DIY1/2.2/3.3
:TEST #3...DEFAULT DURATION FOR PP
.A KCDM7 821117 DH12/PP 2.20
.A KCDM7 821118 DH12/PPD 2.20
:TEST #4...DATE RELATIVE CODES USED IN CONJUNCTION W/ "D" OVERRIDES
>
      SHEF ERROR NUMBER 39
Error No. 39 ->Embedded database comments with internal comments not allowed
.B MCI 820425 C DH01/HG/DRN+90/HG/DRH+2/HG/DRD+1/HG
KCDM7 2.2/3.3/4.4/5.5
      SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
SJSM7 DH0130/2.2/3.3/4.4/5.5
      SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
SMNM7 DH0200/2.2/3.3/4.4/5.5
      SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
SMHM7 DH0201/2.2/3.3/4.4/5.5
      SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line

```

KCKK1 2.2/DRH+2/3.3/DRD+1/4.4/DRN+90/5.5
SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
KCCM7 DH0301/2.2/3.3/4.4/5.5
SHEF WARNING NUMBER 32
Warng No. 32 ->Not enough items in .B body line
.END
:TEST #5...USE OF PY, QY, AND HY ILLEGALLY
.A KCDM7 1117 DH12/PY 9.9
>
SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
.A KCDM7 1117 Z DH12/QY 9.9
>
SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
.A KCDM7 1117 DH12/HY 9.9
>
SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
.E KCDM7 1117 C DH13/PY/DIH1/9.9/9.9
>
SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
.E KCDM7 1117 C DH13/QY/DIH1/9.9/9.9
>
SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
.A KCDM7 1117 C DH13/HY/DIH1/9.9
>
SHEF ERROR NUMBER 35
Error No. 35 ->Zulu,DR or DI coded with send code QY,PY or HY
:TEST #6...DURATION CODE "X"
>
SHEF ERROR NUMBER 39
Error No. 39 ->Embedded database comments with internal comments not allowed
.A KCDM7 1201 DH12/PPX 4.33
:TEST #7...DEFAULT POINTER "Z"
>
SHEF ERROR NUMBER 39
Error No. 39 ->Embedded database comments with internal comments not allowed
.A KCDM7 1202 DH12/HGIRZZZ 3.3/DH13/HGZZZZZ 4.4/DH14/HG 5.5
:TEST #8...ERROR #1
THESE LINES
SHOULD BE
IGNORRED
.A KCDM7 1120 DH12/HG 2.2
THIS ONE TOO...
.A SJSM7 1120 DH12/HG 3.3

.C SMNM7 1120 DH12/HG 4.4
>
SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
...THAT IS ALL...
>
SHEF ERROR NUMBER 1
Error No. 1 ->This line not decoded
MKCWRKRSC EWOUS00 KKRF 292200
:SHEF.14...29NOV82...CREATION DATES...DATE RELATIVES IN .E FORMAT
.A KCDM7 820425 DH07/DC042507/HGIF 2.2/DH08/DC8204250800/HGIF 3.3/
.A1 DH0801/DC8204250801/HGIF 4.4
.A SJSM7 841026 CD DH01/DC8410260100/HGIF 5.5/DH02/DC102602/HGIF 6.6/
.A1 DH0201/DC8410260201/HGIF 7.7

Warn No. 32 ->Not enough items in .B body line
SJSM7 6.6/DRY-1/7.7/DRY-2/8.8

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line
.END

.B MBRFC 1231 C DH16/HG/PP/HK

KCDM7 2.2/3.3/4.4

KCCM7 3.3/DRN+61/4.4/DH23/DRN+61/8.9

SMNM7 7.6/DRH+1/4.8/DRH+2/2.9

SJSM7 2.7/DRD+1/5.0/DRD+2/3.8

KCKK1 3.7/DRM+1/2.9/DRM+2/8.3

>

SHEF ERROR NUMBER 24

Error No. 24 ->Bad data somehow

LKCM7 2.7/DRY+1/8.5/DRY+2/33.7

.END

.B MBRFC 0101 DH02/HG/PP/HK

KCCM7 3.9/5.7/4.2

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line

KCDM7 5.9/DRN-61/4.8/DH01/DRN-61/45.9

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line

LKCM7 2.3/DRH-1/8.6/DRH-2/56.87

KCKK1 5.8/DRD-1/3.4/DRD-2/333.7

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line

SJSM7 3.2/DRM-1/1.11/DRM-2/1111.1

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line

SMNM7 7.7/DRY-1/.65/DRY-2/546.33

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line

.END

:TEST #3...MISSING .END IN .B MESSAGE

.B MBRFC 0119 DH12/HG

KCDM7 4.4

.B MBRFC 0119 DH12/HG

>

SHEF ERROR NUMBER 34

Error No. 34 ->No .END at end of .B

KCCM7 3.2

.B MBRFC 0119 DH12/HG

>

SHEF ERROR NUMBER 34

Error No. 34 ->No .END at end of .B

LKCM7 3.4

.B MBRFC 0119 DH12/HG

>

SHEF ERROR NUMBER 34

Error No. 34 ->No .END at end of .B

KCKK1 4.6

.B MBRFC 0119 DH12/HG

> SHEF ERROR NUMBER 34
Error No. 34 ->No .END at end of .B
SMNM7 5.5
:MKCWRKRSC EWOUS00 KKRF 191600
:SHEF.16...MISSING .END AT END OF A MESSAGE
.B MBRFC 0119 DH12/HG

> SHEF ERROR NUMBER 34
Error No. 34 ->No .END at end of .B
KCDM7 4.3
.B MBRFC 0119 DH12/HG

> SHEF ERROR NUMBER 34
Error No. 34 ->No .END at end of .B
KCCM7 3.7
.B MBRFC 0119 DH12/HG

> SHEF ERROR NUMBER 34
Error No. 34 ->No .END at end of .B
SMNM7 5.5
: MEMBER DATA11 - TEST SHEF DATA INPUT FOR VERSION 1.1 PARSER ENHANCEMENT
TS

> SHEF ERROR NUMBER 3
Error No. 3 ->Less than 3 characters in ID of message source
MKCWRKRSC EWOUS00 KKRF 252000
:SHEF.17 - VERSION 1.1 ENHANCEMENTS - TEST DATA SET - 8/84
:TEST A - TYPE/SOURCE CODE RF
.B MSR 0401 DH12/HGIRF/MSIRF/SWIRF
MI101 2.0/2.0/2.0
MI102 M/1.1/1.1
.END
:TEST B - USE OF COLON AS ON/OFF SWITCH
.B TOP 0810 DH12/HG:STAGE:/PPP:PCPN:
BARK2 4.8/1.25
SEWK2 2.1/
CREK2 /1.61
.END
.B MCI 0810 DH12/HG/PPP
KCDM6 :KANSAS CITY: 7.5/1.20, SJSM6 :ST JOSEPH: 11.4/
:SMITHVILLE: SMHM6 11.7/9.8 ,:AGENCY: AGYM6 5.0/2.36
:MARYVILLE: MVYM6 4.1/1.11:,SUMNER: SMNM6 6.1/
>
SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
.END
.B:REVISION:R MCI:KANSAS CITY: 08:AUG:10:TENTH: DH12:1200Z:/HG/PPP
KCD:KANSAS CITY:M6:MISSOURI: 4.8/1:ONE:.06:POINT 06
.E:EEE:N:NNN:D:DDD
.DOT B:.B MCI 0812 DH12/HG
SJSM6 12.3
.END:.END

.A KCCM6:BANNISTER RD: 0810 C DH07/PPP:24 HR PCPN: 1.32
.A LKCM6 :LAKE CITY:0810 C DH07/PPP:24 HR PCPN: 0.91

>
SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data

.A SSTM6:SHRPS STA:0810 C DH07/PPP:24 HR PCPN:1.42

>
SHEF ERROR NUMBER 2

Error No. 2 ->No space in positional data

:WAVERLY..A WVYM6 0810 C DH07/PPP 1.38

.E KCDM6:KANSAS CITY: 0812 C DH07/DIH-6/HG/7.7/7.8/7.9/8.0

:ST JOSEPH:.E SJSM6 0811 C DH07/DIH-6/HG/9.8/9.9/9.7

:TEST C - POS OR NEG TIME INCREMENT IN .E FORMAT

.E SION2 0810 DH12/DIH-6/HG/21.4/21.3/21.2/21.1

.E KCDM6 0809 C DH06/DIH+6/HG/7.3/7.4/7.5/7.6/7.7

.E SJSM6 0809 C DH06/DIH6/HG/9.9/9.8/9.7/9.6/9.5

.E SION2 0809 C DH06/DIH-06/HG/21.3/21.2

.E SION2 0808 C DH06/DIN-10/HG/1.1/1.2

.E SION2 0807 C DH06/DID-01/HG/1.3/1.4

.E SION2 0806 C DH06/DIM-01/HG/1.5/1.6

.E SION2 0805 C DH06/DIY-01/HG/1.7/1.8

.E SION2 0804 C DH06/DIN+99/HG/1.1/1.2

.E SION2 0803 C DH06/DIH+99/HG/1.3/1.4

.E SION2 0802 C DH06/DID+99/HGIF/1.5/1.6

>

SHEF WARNING NUMBER 23

Warng No. 23 ->Forecast data without creation date

>

SHEF WARNING NUMBER 23

Warng No. 23 ->Forecast data without creation date

.E SION2 0801 C DH06/DIM+99/HGIF/1.7/1.8

>

SHEF WARNING NUMBER 23

Warng No. 23 ->Forecast data without creation date

>

SHEF WARNING NUMBER 23

Warng No. 23 ->Forecast data without creation date

.E SION2 0731 C DH06/DIY+99/HGIF/1.9/2.0

>

SHEF WARNING NUMBER 23

Warng No. 23 ->Forecast data without creation date

>

SHEF WARNING NUMBER 23

Warng No. 23 ->Forecast data without creation date

>

SHEF ERROR NUMBER 22

Error No. 22 ->Year not in the range 1976-2020 for local time zone

...use Z for time zone for historical data

:TEST D - OMITTING TRAILING SLASHES

.B MCI 0810 C DH07/HG/HP/PPP

KCDM6 8.3//1.42

SJSM6 11.9

SHEF WARNING NUMBER 32

Warn No. 32 ->Not enough items in .B body line
SMNM6 9.4/932.4
 SHEF WARNING NUMBER 32
Warn No. 32 ->Not enough items in .B body line
SMHM6 //1.14
AGYM6 11.9//.98/1/2/
 >
 SHEF ERROR NUMBER 30
Error No. 30 ->Too many items in .B body line
.END
:TEST E - FORECAST DATA W/O A CREATION DATE
.A KCDM6 0810 C DH06/HGIF 4.6
 >
 SHEF WARNING NUMBER 23
Warn No. 23 ->Forecast data without creation date
.B MCI 0810 DH12/HGIFA
SJSM6 4.4
 >
 SHEF WARNING NUMBER 23
Warn No. 23 ->Forecast data without creation date
.END
.E SION2 0810 DH12/DIH6/HGIF/4.3/6.7/8.1
 >
 SHEF WARNING NUMBER 23
Warn No. 23 ->Forecast data without creation date
 >
 SHEF WARNING NUMBER 23
Warn No. 23 ->Forecast data without creation date
 >
 SHEF WARNING NUMBER 23
Warn No. 23 ->Forecast data without creation date
.TEST F - TIME SPECIFICATION IN SECONDS
.A KCDM6 0812 DY840812120059/HG 8.12
.A KCDM6 0811 DM0811120059/HG 8.11
.A KCDM6 0810 DD10120045/HG 8.10
.A KCDM6 0809 DH129999/HG 8.09
 >
 SHEF ERROR NUMBER 8
Error No. 8 ->Observation time error
.A KCDM6 0808 C DH07/DN5959/HG 8.08
.A KCDM6 0807 C DH07/DN30/DS30/HG 8.07
.A KCDM6 0812 DY84/DM08/DD12/DH12/DN00/DS59/HG 8.12
.B MCI 0812 DY840812120059/HG
SJSM6 8.12
.END
.B MCI 0811 DM0811120059/HG
SJSM6 8.11
.END
.B MCI 0810 DD10120045/HG
SJSM6 8.10
.END
.B MCI 0809 DH125959/HG
SJSM6 8.09

.END
.B MCI 0808 C DH07/DN5959/HG
SJSM6 8.08
.END
.B MCI 0807 C DH07/DN30/DS30/HG
SJSM6 8.07
.END
.B MCI 0812 DY84/DM08/DD12/DH12/DN00/DS59/HG
SJSM6 8.12
.END
.B MCI 0813 C DH0715/HG/DRS-30/HG/DRS+30/HG
SMNM6 8.13/81.3/813.
.END
.B MCI 0813 C DH07/HG
LKCM6 4.7
KCCM6 DRS-30/5.8
CKKK2 DY840812124530/6.9

>
SHEF ERROR NUMBER 22
Error No. 22 ->Year not in the range 1976-2020 for local time zone
...use Z for time zone for historical data
GLLM6 DM0811120059/3.3
TTNM6 DD10120040/2.2
WVYM6 DH063030/11.1
SMHM6 DN2759/11.4
BLVM6 DS30/6.1
PRIM6 DS101/4.9

>
SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
.END
.E LKCM6 0812 C DY840812124530/DIH6/HG/4.4/4.5

>
SHEF ERROR NUMBER 22
Error No. 22 ->Year not in the range 1976-2020 for local time zone
...use Z for time zone for historical data
.E CKKK2 0811 C DM0811120059/DIH6/HG/3.3/3.4
.E GLLM6 0810 C DD10120059/DIH6/HG/2.2/2.3
.E TTNM6 0809 C DH063030/DIH6/HG/11.1/11.2
.E WVYM6 0808 DN2759/DIH6/HG/14.2/14.3
.E SMHM6 0807 DS30/DIH6/HG/11.2/11.3
.E BLVM6 0806 C DS101/DIH6/HG/6.1/6.2

>
SHEF ERROR NUMBER 8
Error No. 8 ->Observation time error
.E PRIM6 0812 C DH07/DIS30/HG/4.4/4.5
.E PATM6 0812 C DH0659/DIS+90/HG/13.1/13.2
.E BRNM6 0812 C DH0701/DIS-90/HG/12.2/12.3
.E KCDM6 0812 Z DY840101000029/DIS-30/HG/7.7/7.8
.E SJSM6 0429 C DH015901/DIS+30/HG/1.2/1.3/1.4/1.5
:SHEF.18 - TESTS FOR VERSION 1.1 8/84
.B MCI 840429 C DH0301/HG/DRS-59/HG/DRS-61/HG
SJSM6 3.1/3.2/3.3

.END
.B STL 840429 DH0801/PP/DRS-59/PP/DRS-61/PP
SJSM6 3.1/3.2/3.3
.END
.B OMA 840429 CD DH0301/SW/DRS-59/SW/DRS-61/SW
NEBN2 3.1/3.2/3.3
.END
.B DSM 840429 CS DH0201/XW/DRS-59/XW/DRS-61/XW
SIOI2 3.1/3.2/3.3
.END
.B MCI 840301 DH0001/HG/DRS-60/HG/DRS-90/HG
KCDM6 4.7/4.8/4.9
.END
.B MCI 831231 C DH1801/HG/DRS-60/HG/DRS-90/HG
LKCM6 4.5/4.6/4.7
.END
.B COU 840429 C DH055959/HP/DRH-3/HP
PRIM6 8.1/8.2
.END
.B SGF 840429 C DH02/HG/DS30/HG/DH0300/HG/DS30/HG
KCCM6 1.1/2.2/3.3/4.4
.END
.B MCI 840828 C DH07/DVS00/PPV/DVS99/PPV
KCDM6 1.2/2.8
.END
:TEST EXTENSION OF YEARS FOR DAYLIGHT CHANGEOVER TABLE
:NOW VALID IMPLIED 1976 - 1999 AND 2000 - 2020
:NOT VALID IMPLIED 1921 - 1975
:BAD YEAR 75
.A AAAAA 750101 M DH12/HG 2.3: SHEF.01
 SHEF ERROR NUMBER 22
Error No. 22 ->Year not in the range 1976-2020 for local time zone
 ...use Z for time zone for historical data
:BAD YEAR 21
.A BBBBB 210101 M DH12/HG 2.3: SHEF.01
 SHEF ERROR NUMBER 22
Error No. 22 ->Year not in the range 1976-2020 for local time zone
 ...use Z for time zone for historical data
:GOOD YEAR 76 M
.A CCCCC 760101 M DH12/HG 2.3: SHEF.01
:GOOD YEAR 99
.A DDDDD 990101 M DH12/HG 2.3: SHEF.01
:GOOD YEAR 00
.A EEEEE 000101 M DH12/HG 2.3: SHEF.01
:GOOD YEAR 20
.A FFFFF 200101 M DH12/HG 2.3: SHEF.01
:TEST A CHANGE OVER DATE TO DAYLIGHT FOR A YEAR, E.G. 2020
:NEED TO LOOK AT THE SHEF_OUT OR SHEF_LIST FILE FOR VERIFICATION
.A GGGGG 200405 M DH0100/HG 2.1: SHEF.01
.A HHHHH 200405 Z DH0100/HG 2.2: SHEF.01
.A GGGGG 200405 M DH0200/HG 2.1: SHEF.01
.A HHHHH 200405 Z DH0200/HG 2.2: SHEF.01
.A GGGGG 200405 M DH0300/HG 2.1: SHEF.01

.A HHHHH 200405 Z DH0300/HG 2.2: SHEF.01
: TEST UNDERSCORE IN ID IN .A .B .E
.A _IIII 990205 M DH020000/HG 2.3: SHEF.01
.B MCI 820101 Z DH12/HG
G_LLM7 1.1
.END
.E SMNM7_44 820101 Z DH12/HG/DIH06/2.1/2.2/2.3/2.4
: TEST USING ALL ALPHA CHARACTERS EXCEPT FOR 'O' AND 'I' FOR DATA
: QUALIFIERS .A PRODUCTS
.A _IIII 970205 M DH020000/HG 2.3A: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3B: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3C: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3D: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3E: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3F: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3G: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3H: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3J: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3K: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3L: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3M: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3N: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3P: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3Q: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3R: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3S: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3T: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3U: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3V: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3W: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3X: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3Y: SHEF.01
.A _IIII 970205 M DH020000/HG 2.3Z: SHEF.01
: I SHOULD GIVE ERROR.. O TRANSLATED TO ZERO
.A _IIII 970205 M DH020000/HG 2.3I: SHEF.01

>

SHEF ERROR NUMBER 31

Error No. 31 ->Bad character in the line

.A _IIII 970205 M DH020000/HG 2.3O: SHEF.01
: TEST USING ALL ALPHA CHARACTERS EXCEPT FOR 'O' AND 'I' FOR DATA
: QUALIFIERS .B PRODUCTS
.B MCI 820101 Z DH12/HG
G_LLM7 1.1A
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1B
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1C
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1D
.END

.B MCI 820101 Z DH12/HG
G_LLM7 1.1E
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1F
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1G
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1H
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1J
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1K
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1L
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1M
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1N
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1P
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1Q
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1R
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1S
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1T
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1U
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1V
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1W
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1X

```
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1Y
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1Z
.END
:I SHOULD GIVE ERROR .. O TRANSLATED TO ZERO
.B MCI 820101 Z DH12/HG
G_LLM7 1.1I
    >
        SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
.END
.B MCI 820101 Z DH12/HG
G_LLM7 1.1O
.END
: TEST USING ALL ALPHA CHARACTERS EXCEPT FOR 'O' AND 'I' FOR DATA
: QUALIFIERS .E PRODUCTS
.E SMNM7_44 820101 Z DH12/HG/DIH06/1A/2B/3C/4D/5E/6F/7G/8H/9J/0K/1L
.E SMNM7_44 820101 Z DH12/HG/DIH06/2M/3N/4P/5Q/6R/7S/8T/9U/0V/1W/2X/3Y/3Z
:I SHOULD GIVE ERROR ..O TRANSLATED TO ZERO
.E SMNM7_44 820101 Z DH12/HG/DIH06/2I/3O
    >
        SHEF ERROR NUMBER 31
Error No. 31 ->Bad character in the line
: TEST NEW TYPSE SOURCE CODES .A
.A _IIII 970205 M DH020000/HGI1G 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI1M 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI1R 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI1P 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI1Z 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI2G 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI2M 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI2R 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI2P 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI2Z 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI3G 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI3M 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI3R 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI3P 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI3Z 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI4G 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI4M 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI4R 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI4P 2.3: SHEF.01
.A _IIII 970205 M DH020000/HGI4Z 2.3: SHEF.01
.B MCI 820101 Z DH12/HGI1G
G_LLM7 1.1A
.END
.B MCI 820101 Z DH12/HGI1M
G_LLM7 1.1B
.END
```

```
.B MCI 820101 Z DH12/HGI1R
G_LLM7 1.1C
.END
.B MCI 820101 Z DH12/HGI1P
G_LLM7 1.1D
.END
.B MCI 820101 Z DH12/HGI1Z
G_LLM7 1.1E
.END
.B MCI 820101 Z DH12/HGI2G
G_LLM7 1.1F
.END
.B MCI 820101 Z DH12/HGI2M
G_LLM7 1.1G
.END
.B MCI 820101 Z DH12/HGI2R
G_LLM7 1.1H
.END
.B MCI 820101 Z DH12/HGI2P
G_LLM7 1.1J
.END
.B MCI 820101 Z DH12/HGI2Z
G_LLM7 1.1K
.END
.B MCI 820101 Z DH12/HGI3G
G_LLM7 1.1L
.END
.B MCI 820101 Z DH12/HGI3M
G_LLM7 1.1M
.END
.B MCI 820101 Z DH12/HGI3R
G_LLM7 1.1N
.END
.B MCI 820101 Z DH12/HGI3P
G_LLM7 1.1P
.END
.B MCI 820101 Z DH12/HGI3Z
G_LLM7 1.1Q
.END
.B MCI 820101 Z DH12/HGI4G
G_LLM7 1.1R
.END
.B MCI 820101 Z DH12/HGI4M
G_LLM7 1.1S
.END
.B MCI 820101 Z DH12/HGI4R
G_LLM7 1.1T
.END
.B MCI 820101 Z DH12/HGI4P
G_LLM7 1.1U
.END
.B MCI 820101 Z DH12/HGI4Z
G_LLM7 1.1U
```

```

.END
.E SMNM7_44 820101 Z DH12/HGI1G/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI1M/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI1R/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI1P/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI1Z/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI2G/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI2M/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI2R/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI2P/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI2Z/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI3G/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI3M/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI3R/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI3P/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI3Z/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI4G/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI4M/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI4R/DIH06/2M
.E SMNM7_44 820101 Z DH12/HGI4P/DIH06/1A
.E SMNM7_44 820101 Z DH12/HGI4Z/DIH06/2M
: TEST CENTURY IN DATE FIELD OF POSITIONAL DATA
.A _IIII 18970205 Z DH020000/HGI1G 2.3 :CCYRMMDD
.A _IIII 19970205 Z DH020000/HGI1M 2.3
.A _IIII 20000205 Z DH020000/HGI1R 2.3
.A _IIII 20010205 Z DH020000/HGI1P 2.3
: TEST EXPANSION OF DT FIELD
.A _IIII 18970205 Z DT19970201010101/HGI1G 2.3 :DTCCYRMMDDHHNNSS
.A _IIII 19970205 Z DT200102010101/HGI1M 2.3 :DTCCYRMMDDHHNN
.A _IIII 18970205 Z DT1997020101/HGI1G 2.3 :DTCCYRMMDDHH
.A _IIII 19970205 Z DT20010201/HGI1M 2.3 :DTCCYRMMDD
.A _IIII 18970205 Z DT199702/HGI1G 2.3 :DTCCYRMM
.A _IIII 19970205 Z DT2001/HGI1M 2.3 :DTCCYR
.A _IIII 19960205 Z DT21/HGI1M 2.3 :DTCC
.E SMNM7_44 18970205 Z DT19970201010101/HGI1G/DIH06/1A
.E SMNM7_44 19970205 Z DT200102010101/HGI1M/DIH06/2M
.E SMNM7_44 18970205 Z DT1997020101/HGI1R/DIH06/1A
.E SMNM7_44 19970206 Z DT20010201/HGI1P/DIH06/2M
.E SMNM7_44 18970205 Z DT199702/HGI1Z/DIH06/1A
.E SMNM7_44 19970205 Z DT2001/HGI2G/DIH06/2M
.E SMNM7_44 19960205 Z DT21/HGI2M/DIH06/1A
:TEST DJ JULIAN TIME WITH AND WITHOUT CENTURY, DJCCYRDDD OR DJYRDDD
.A _IIII 18970205 Z DJ2001365/HGI1G 2.3 :DJCCYRDDD
.A _IIII 19970205 Z DJ97365/HGI1M 2.3 :DJYRDDD
: TEST DT OVERWRITES IN .B
.B MCI 0813 Z DH00/HG
CKKK2 DT20010812124530/6.9 :DTCCYRMMDDHHNNSS
CKKK2 DT200108121245/6.9 :DTCCYRMMDDHHNN
CKKK2 DT2001081212/6.9 :DTCCYRMMDDHH
CKKK2 DT20010812/6.9 :DTCCYRMMDD
CKKK2 DT200108/6.9 :DTCCYRMM
CKKK2 DT2001/6.9 :DTCCYR
CKKK2 DT20/6.9 :DTCC

```

.END
: ANOTHER TEST DT OVERWRITES IN .B
.B MCI 970813 Z DH00/HG/PP/TA
KCKK2 DT20010812124530/6.9 /DT199809121245/6.9 /DT1999081111/6.9
KCKK2 DT20010812/6.9 /DT200209/6.9 /DT2005/6.9
.END
: TEST CENTURY AND SUBSEQUENT VALUES FOR CREATION DATE
.A _IIII 990205 Z DH020000/DC200002050101/HG 2.3 : DCCCYRMMDDHHNN
.A _IIII 990205 Z DH020000/DC9902050101/HG 2.3 : DCYRMMDDHHNN
.A _IIII 990205 Z DH020000/DC02050101/HG 2.3 : DCMMDDHHNN
.A _IIII 990205 Z DH020000/DC020501/HG 2.3 : DCMMDDHH
.A _IIII 990205 Z DH020000/DC0205/HG 2.3 : DCMMDD
: TEST CENTURY IN DATE FIELD OF POSITIONAL DATA
.A _IIII 18970205 Z DH020000/HGI1G 2.3 :CCYRMMDD
.A _IIII 19970205 Z DH020000/HGI1M 2.3
.A _IIII 20000205 Z DH020000/HGI1R 2.3
.A _IIII 20010205 Z DH020000/HGI1P 2.3
: TEST EXPANSION OF DT FIELD
.A _IIII 18970205 Z DT19970201010101/HGI1G 2.3 :DTCCYRMMDDHHNNSS
.A _IIII 19970205 Z DT200102010101/HGI1M 2.3 :DTCCYRMMDDHHNN
.A _IIII 18970205 Z DT1997020101/HGI1G 2.3 :DTCCYRMMDDHH
.A _IIII 19970205 Z DT20010201/HGI1M 2.3 :DTCCYRMMDD
.A _IIII 18970205 Z DT199702/HGI1G 2.3 :DTCCYRMM
.A _IIII 19970205 Z DT2001/HGI1M 2.3 :DTCCYR
.A _IIII 19960205 Z DT21/HGI1M 2.3 :DTCC
.E SMNM7_44 18970205 Z DT19970201010101/DC200002050101/HGI1G/DIH06/1A/DT23/2A
.E SMNM7_44 19970205 Z DT200102010101/DC9902050101/HGI1M/DIH06/2M
.E SMNM7_44 18970205 Z DT1997020101/DC02050101/HGI1R/DIH06/1A
.E SMNM7_44 19970206 Z DT20010201/DC020501/HGI1P/DIH06/2M
.E SMNM7_44 18970205 Z DT199702/HGI1Z/DIH06/1A
.E SMNM7_44 19970205 Z DT2001/HGI2G/DIH06/2M
.E SMNM7_44 19960205 Z DT21/HGI2M/DIH06/1A
: TEST DJ JULIAN TIME WITH AND WITHOUT CENTURY, DJCCYRDDD OR DJYRDDD
.A _IIII 18970205 Z DJ2001365/DC200002050101/HGI1G 2.3 :DJCCYRDDD
.A _IIII 19970205 Z DJ97365/HGI1M 2.3 :DJYRDDD
: TEST DT OVERWRITES IN .B
.B MCI 0813 Z DH00/HG
KCKK2 DT20010812124530/6.9 :DTCCYRMMDDHHNNSS
KCKK2 DT200108121245/6.9 :DTCCYRMMDDHHNN
KCKK2 DT2001081212/6.9 :DTCCYRMMDDHH
KCKK2 DT20010812/6.9 :DTCCYRMMDD
KCKK2 DT200108/6.9 :DTCCYRMM
KCKK2 DT2001/6.9 :DTCCYR
KCKK2 DT20/6.9 :DTCC
.END
: ANOTHER TEST DT OVERWRITES IN .B
.B MCI 970813 Z DH00/HG/PP/TA
KCKK2 DT20010812124530/6.9 /DT199809121245/6.9 /DT1999081111/6.9
KCKK2 DT20010812/6.9 /DT200209/6.9 /DT2005/6.9
.END
: TEST CENTURY IN DATE FIELD OF POSITIONAL DATA
.A _IIII 0205 Z DH020000/HGI1G 2.3 :CCYRMMDD
.A _IIII 0205 Z DH020000/HGI1M 2.3

.A _IIII 0205 Z DH020000/HGI1R 2.3
.A _IIII 0205 Z DH020000/HGI1P 2.3
: TEST EXPANSION OF DT FIELD
.A _IIII 0205 Z DT19970201010101/HGI1G 2.3 :DTCCYRMMDDHHNNSS
.A _IIII 0205 Z DT200102010101/HGI1M 2.3 :DTCCYRMMDDHHNN
.A _IIII 0205 Z DT1997020101/HGI1G 2.3 :DTCCYRMMDDHH
.A _IIII 0205 Z DT20010201/HGI1M 2.3 :DTCCYRMMDD
.A _IIII 0205 Z DT199702/HGI1G 2.3 :DTCCYRMM
.A _IIII 0205 Z DT2001/HGI1M 2.3 :DTCCYR
.A _IIII 0205 Z DT21/HGI1M 2.3 :DTCC
.E SMNM7_44 0205 Z DT19970201010101/DC200002050101/HGI1G/DIH06/1A/DT23/2A
.E SMNM7_44 0205 Z DT200102010101/DC9902050101/HGI1M/DIH06/2M
.E SMNM7_44 0205 Z DT1997020101/DC02050101/HGI1R/DIH06/1A
.E SMNM7_44 0206 Z DT20010201/DC020501/HGI1P/DIH06/2M
.E SMNM7_44 0205 Z DT199702/HGI1Z/DIH06/1A
.E SMNM7_44 0205 Z DT2001/HGI2G/DIH06/2M
.E SMNM7_44 0205 Z DT21/HGI2M/DIH06/1A
: TEST DJ JULIAN TIME WITH AND WITHOUT CENTURY, DJCCYRDD OR DJYRDD
.A _IIII 0205 Z DJ2001365/DC200002050101/HGI1G 2.3 :DJCCYRDD
.A _IIII 0205 Z DJ97365/HGI1M 2.3 :DJYRDD
: TEST DT OVERWRITES IN .B
.B MCI 0813 Z DH00/HG
KCKK2 DT20010812124530/6.9 :DTCCYRMMDDHHNNSS
KCKK2 DT200108121245/6.9 :DTCCYRMMDDHHNN
KCKK2 DT2001081212/6.9 :DTCCYRMMDDHH
KCKK2 DT20010812/6.9 :DTCCYRMMDD
KCKK2 DT200108/6.9 :DTCCYRMM
KCKK2 DT2001/6.9 :DTCCYR
KCKK2 DT20/6.9 :DTCC
.END
: ANOTHER TEST DT OVERWRITES IN .B
.B MCI 0813 Z DH00/HG/PP/TA
KCKK2 DT20010812124530/6.9 /DT199809121245/6.9 /DT1999081111/6.9
KCKK2 DT20010812/6.9 /DT200209/6.9 /DT2005/6.9
.END
NUMBER OF WARNING ERRORS IS 46
NUMBER OF FATAL ERRORS IS 164

Attachment D - Sample sql_errors File

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> GLLM7 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> SJSM7 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> KCDM7 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> KCKK1 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> KCCM7 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> WVYM7 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Mar 11 103 23:31 program:shef_decode_raw
Error 100: Could not select record(raw96)-> BOOM7 HGIRZZZ 1982-01-01 0

ISAM error: duplicate value for a record with unique key.

Attachment E - Example Stats Log File

LOG FOR SHEF PARSING & POSTING - Program: shef_decode_raw

LOG_START_TIME-----> 00:00 10/11/02 (1034294401)

LOG_CURRENT_TIME-----> 18:07 10/11/02 (1034359627)

< PARSING STATISTICS >

#PRODUCTS	#RECORDS	#ERRORS	#WARNINGS
2418	171424	635	691

< INSERT/UPDATE RECORDS STATISTICS >

#INSERTS	#UPDATES
4085	37147

< ARRAY POSTING STATISTICS >

S.DOM R.DOM HADSAALERT#2 MTR SNOTEL ROSAALERT#1 LARCS RR #F ADDJ1F UADJ1

FUTUREDEFAULT

PE	RG	RF	RH	RS	RV	RM	R4	RR	RP	R1	FA	FU	FZ	RZ TOTALS
HG	0	0	3041	0	0	0	210	511	0	0	0	0	2218	5980
PC	0	0	700	0	0	0	0	1	182	0	0	0	0	883
PP	0	0	179	0	0	0	4418	0	0	0	0	254	3282	8133
TA	0	0	0	0	0	0	0	0	0	0	0	700	700	
SW	0	0	0	0	0	0	0	0	0	0	0	7	7	
UQ	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	3920	0	0	0	4629	693	0	0	0	254	6207	15703

00:00 00:00 18:04 00:00 00:00 00:00 00:00 18:04 17:51 00:00 00:00 00:00 15:01 18:00

